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Description of Hypertension Cases in The Krapyak Kidul Health Center Working Area in 2023

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Abstract

Hypertension is a major health problem that is significant globally, including in the working area of Krapyak Kidul Community Health Center, Pekalongan City. This study aims to provide an overview of hypertension cases in Krapyak Kidul Health Center in 2023. This type of research is descriptive using secondary data from hypertension reports available at Krapyak Kidul Health Center. The study was conducted from February 2024 to May 2024, with a total sample of 820 hypertension cases using total sampling technique. The study subjects included patients with an age range of 0-28 days to more than 65 years, with a focus on the productive age group (45-64 years) and the elderly (>65 years). The variables analyzed included age, gender, and type of hypertension case. Data were analyzed using SPSS (Statistical Package for the Social Sciences) with descriptive analysis method to identify the prevalence, demographic characteristics, and distribution of hypertension cases. The results of the study are expected to provide in-depth insight into the prevalence of hypertension and case characteristics in Krapyak Kidul Community Health Center. The findings will be useful for designing more effective health interventions, as well as supporting efforts to improve public health in the area.

Keywords: *Age, Hypertension, Prevalence*

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1. Introduction

According to the World Health Organization (WHO), 1.13 billion people worldwide suffer from hypertension, with the majority occurring in low- and middle-income countries. By 2025, it is estimated that the proportion of people with hypertension will reach around 29%. This phenomenon also occurs in Indonesia, where based on the results of measurements in the population aged over 18 years with a large number of sufferers at 34.1%, this prevalence continues to increase compared to 2013, which was 25.8% (Ministry of Health RI, 2023). The results of a study conducted by Faisal, et al.(2022), showed that the prevalence of hypertension in productive age in Indonesia is quite high at 22.49%, but only 10.60% realize that they have hypertension (awareness). Of those who realized they had hypertension, only 23.73% took treatment, and of those who took treatment, only 27.97% were under control. Obesity is one of the significant risk factors for hypertension, someone who is obese has a 2.75 times risk of developing hypertension compared to someone who has a normal weight (Faisal et al., 2022).

Hypertension, or high blood pressure, is one of the most common and significant health problems globally. According to the World Health Organisation (WHO), hypertension is a major risk factor for heart disease, stroke, and kidney failure. In Indonesia, hypertension has become a serious public health problem, with prevalence continuing to increase year by year. At the local level, such as in the working area of Krapyak Kidul Community Health Centre, hypertension is also a major health problem that requires special attention. Puskesmas Krapyak Kidul, as one of the health facilities in Pekalongan City, plays an

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important role in the monitoring and management of non-communicable diseases in the region. Although efforts have been made to reduce the prevalence of hypertension through various health programmes and interventions, recent data shows that hypertension remains a major health challenge in the region. In 2023, it is important to evaluate the picture of hypertension cases in Krapyak Kidul Health Centre to understand more about the prevalence, risk factors, as well as the effectiveness of managing this disease. Based on data from the Pekalongan City Health Office, hypertension is one of the non-communicable diseases with the highest prevalence. However, specific information on the hypertension situation in Krapyak Kidul Health Centre needs to be investigated further to design more targeted interventions. Several risk factors, such as unhealthy diet, lack of physical activity, smoking, and obesity, contribute significantly to the high rate of hypertension in the local community.

According to the World Health Organisation (WHO), hypertension is a global health problem that affects an estimated 1.13 billion people worldwide. Hypertension, or high blood pressure, is a medical condition in which the blood pressure in the arteries increases consistently, increasing the risk of various serious health problems such as heart disease, stroke, and kidney failure. WHO projections indicate that by 2025, approximately 29% of the global population is expected to have hypertension. This figure reflects the trend of increasing prevalence of hypertension worldwide, which is likely due to lifestyle changes, urbanisation and other environmental factors. This increase in prevalence suggests the need for more coordinated global action to address hypertension, including strategies to increase awareness, access to healthcare, and community-based interventions that can help manage and prevent hypertension in different countries.

The majority of people with hypertension are in low- and middle-income countries. This is due to a variety of factors, including limited access to healthcare, low awareness of the condition, and the prevalence of risk factors such as unhealthy diet and lack of physical activity. Limited economic conditions and health infrastructure in these countries often hamper efforts for the prevention, detection and management of hypertension. Hypertension often known as high blood pressure is a condition where systolic blood pressure is higher than the normal limit, which is more than 140 mmHg and diastolic blood pressure is more than 90 mmHg, (WHO 2023). This event causes the heart to work harder to pump blood throughout the body through the blood vessels, causing blood vessels to collapse and even death. Hypertension is one of the common health problems that is often faced in various countries, this is because hypertension is a major risk factor that exacerbates cardiovascular diseases such as heart attack, heart failure, stroke, and kidney disease.2 factors cause hypertension, namely factors that can be changed and factors that cannot be changed. Factors that can be changed are lifestyle and food consumption. While unchangeable factors such as genetics, age, and gender.

The majority of people with hypertension reside in low- and middle-income countries, due to various factors that limit the prevention and management of this condition. Limited access to healthcare is one of the main problems; lack of adequate medical facilities and health personnel hinders early detection and treatment of hypertension. In addition, low public awareness about hypertension-including its symptoms, risks, and the importance of management-contributes to the high prevalence of the disease. Lifestyle risk factors, such as unhealthy diets and lack of physical activity, also play a major role; high-salt diets and sedentary lifestyles common in these countries exacerbate the condition of hypertension. Coupled with limited economic conditions and inadequate healthcare infrastructure, efforts to prevent, detect and manage hypertension are often hampered. Hypertension, or high blood pressure, is defined as a systolic blood pressure of more than 140 mmHg and a diastolic blood pressure of more than 90 mmHg (WHO, 2023). This condition increases the risk of heart disease, stroke, and kidney failure, making it urgent to improve healthcare access, public awareness, and lifestyle interventions to address this issue.

According to the Pekalongan City Health Office (2020) in Pekalongan in 2019 the highest prevalence of non-communicable diseases were hypertension, diabetes, and heart

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disease. Based on secondary data obtained from the Krapyak Kidul Community Health Center, NCDs are still the highest cases. Based on the Annual Report of Pekalongan City Health Office (2020), several previous studies have identified the main risk factors for non-communicable diseases in Pekalongan City, including unhealthy diet, lack of physical activity, smoking, and obesity. The purpose of this study was to provide a clear picture of hypertension cases in the Krapyak Kidul Health Center working area.

An unhealthy diet often includes the consumption of foods that are high in salt, fat and sugar, which can lead to high blood pressure and increase the risk of hypertension. Lack of physical activity contributes to weight gain and obesity, which are major risk factors for hypertension. Smoking also worsens cardiovascular health, increasing the likelihood of hypertension and heart disease. Obesity, with its high amount of body fat, magnifies the burden on the cardiovascular system, causing an increase in blood pressure that potentially leads to hypertension. According to the Pekalongan City Health Office report (2020), in 2019, the non-communicable diseases (NCDs) with the highest prevalence in Pekalongan were hypertension, diabetes, and heart disease. Secondary data obtained from the Krapyak Kidul Community Health Centre shows that hypertension, along with other non-communicable diseases, remains the main case faced in the area. The Pekalongan City Health Office Annual Report (2020) identifies several key risk factors that contribute to the high NCD cases in the area, including unhealthy diet, lack of physical activity, smoking, and obesity. Unhealthy diets, such as high consumption of salt and fat, and lack of physical activity play a major role in increasing the risk of hypertension. Smoking habits and obesity are also significant factors that worsen health conditions, trigger the development of hypertension, and increase the risk of other serious health complications.

This study aims to provide a clearer picture of the prevalence and characteristics of hypertension cases in the Krapyak Kidul Health Centre working area. By understanding the patterns and risk factors that influence hypertension rates in this area, this study aims to provide useful data for the development of more effective prevention and management strategies. This includes designing more targeted public health programmes, raising awareness about healthy lifestyles, and improving access and quality of health services in the area. With a data-driven approach, it is expected to reduce the burden of hypertension and improve overall public health in Pekalongan City.

2. Method

This is a descriptive study with a literature study sampling technique from the working area of Krapyak Kidul Health Center in 2023 regarding hypertension. The study was conducted at Krapyak Kidul Health Center from February 2024 to May 2024. Data collection techniques with secondary data, namely hypertension report data in 2023 at Krapyak Kidul Health Center, In determining the sample size, the researchers used total sampling with a total of 820 cases.

The subjects in this study were hypertensive patients aged 0-28 days to > 65 years, with a target focus on productive age (45–64 years) and the elderly (> 65 years) in the Krapyak Kidul Health Center working area. The variables studied were age, gender, and case type. This study used descriptive analysis to provide an overview of hypertension in the Krapyak Kidul Health Center working area.

Data analysis method using SPSS (Statistical Package for the Social Sciences).

1. Type of Research

   This study is a descriptive study designed to provide an in-depth description of hypertension cases in the working area of Krapyak Kidul Health Center during 2023. Descriptive research aims to describe phenomena without intervening or experimenting. The focus of this study is to understand the prevalence, characteristics, and distribution of hypertension cases in the population under study.

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2. Location and Time of Research
   This study was conducted at Krapyak Kidul Community Health Center, located in Pekalongan City. The research implementation period lasted from February 2024 to May 2024. The selection of this period allowed researchers to analyze relevant and up-to-date data from 2023, and provided sufficient time for data collection and analysis.
3. Sampling Technique
   The sampling technique used was a literature study relying on secondary data. Secondary data was taken from the hypertension report of 2023 available at Krapyak Kidul Community Health Center. By using total sampling technique, all hypertension cases registered during 2023 will be analyzed, without random sample selection. This total sampling ensures that all available cases will be included in the study, providing a complete and comprehensive picture of the hypertension situation in the region.

3. Results and Discussion

The Remo men's dance is performed by sinden-pangreman of Wayang Jek Dong of Pandhawa Laras group. Remo dance is presented at the beginning of the show before the performance of campur sari. With makeup and clothing resembling a man. Wayang Jek Dong shows are now starting to develop and have many series of performances before moving on to the puppet show. Some of these series include Remo Men's Dance by sinden-pangreman wayang kulit (Jek Dong), Campursari, and sometimes there is also a lawak show or a kind of comedy show on stage by certain groups that also appear. However, lawak is not always presented, and it is only optional from the stakeholder. Currently, the Wayang Jek Dong show by the Pandhawa Laras group features Remo men's dance and campur sari in its series of performances. The pangreman is also the sinden of wayang kulit, especially in East Java.

From the data analysis, the highest number of hypertension cases reached 820 cases, while the lowest case was 20 cases.

Table 1. The results of the analysis of the number of hypertension cases in the Krapyak Kidul Health Center working area

No	Case Type	Frequency	%
1.	New	20	2.4
2.	Old	820	97.6
Total	-	840	100.0

Source : Krapyak Kidul Community Health Center

Based on Table 1, hypertension cases in Krapyak Kidul Health Center showed that the percentage of hypertension cases recorded was quite high, especially in old cases, which amounted to 97.6%. In the research of Alkhusari et al. (2023), it is explained that the causes of the increase in hypertension cases are unhealthy lifestyles such as lack of physical activity, excessive consumption of alcohol and coffee, smoking, and high levels of stress. Health education is an effort to increase public awareness and take action to maintain health and prevent disease.The prevalence of hypertension in Indonesia has increased to 34.1% from year to year. Hypertension is also one of the causes of death in Southeast Asia, including Indonesia, with a rate of 49.7%. Meanwhile, although infectious diseases are decreasing, non-communicable diseases such as hypertension are increasing. The prevalence of hypertension has high and low cases; the highest case is in South Kalimantan (44.1%), while the lowest is in Papua (22.2%). The estimated total number of people is

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around 63,309,620 people with hypertension cases in Indonesia, with the death rate due to hypertension reaching 427,218 (Medika Alkhusari et al., n.d.).

Table 2. Types of hypertension cases in Krapyak Kidul Health Center working area

No.	Case Type	Frequency	%
1.	New	231	27.5
2.	Old	609	72.5
Total	-	840	100.0

Source : Krapyak Kidul Community Health Center

Based on Table 2, hypertension cases in Krapyak Kidul Health Center showed that the highest percentage of case types were old cases, as many as 609 cases (72.5%), while the types of new cases were 231 cases (27.5%). The causes of hypertension are primary or secondary, with two major types: essential hypertension and secondary hypertension.
Essential hypertension rarely has a known cause. However, it is usually congenital factors such as increasing age, gender, and increased blood pressure accompanied by an increase in blood pressure and body weight, along with lifestyle factors. such as a diet consuming fast food and high fat, a lack of physical activity, and genetics that are likely to lead to essential hypertension (Fratidina et al., n.d.)**.**

Table 3. Gender variable in hypertension in the Krapyak Kidul Health Center working area

No.	Gender	Frequency	%
1.	Male	305	36.3
2.	Female	535	63.7
Total	-	840	100.0

Source : Krapyak Kidul Community Health Center

Based on Table 3, hypertension cases in Krapyak Kidul Health Center showed that the highest percentage of case types occurred in women, with as many as 535 cases (63.7%), while in men there were 305 cases (36.3%). This is in line with the research of Sari et al. (2024), who found that the female gender dominates because it is more at risk of suffering from hypertension. After all, women, when facing problems, consider the conflict to be negative, which can cause stress. In their research, Nurhayati et al. (2023) found that gender affects the increase in blood pressure, especially in menopausal women who experience decreased estrogen levels. Increased levels of high-density lipoprotein (HDL) are influenced by estrogen, which protects women who have not yet reached menopause from atherosclerosis. Low HDL and high low-density lipoprotein (LDL) levels increase blood pressure through atherosclerosis. This process, in which blood vessels have difficulty enlarging their diameter and increasing blood pressure, occurs in women aged 45–55 years, leading to an increase in hypertension in menopausal women. In men, hypertension appears in their late thirties, while in women, it often appears after menopause.

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Table 4. Age variable in hypertension in the Krapyak Kidul Health Center working area variable in hypertension in the Krapyak Kidul Health Center working area

No.	Gender	Frequency	%
1.	0-28 day	4	4
2.	<1 year	4	4
3.	1-4 year	4	4
4.	5-14 year	4	4
5.	15-24 year	4	4
6.	25-44 year	33	3.7
7.	45-64 yar	497	55.6
8.	>65 year	290	32.4
Total	-	840	100.0

Source : Krapyak Kidul Community Health Center

Based on Table 4, the percentage of hypertension patients in Krapyak Kidul Health Center showed that the highest cases were suffered at productive age (45–64 years), with as many as 497 (55.6%) cases, followed by the elderly (<65 years) with 290 (32.4%) cases. The results of this study are in line with the research of Sari et al. (2024), who found that the increasing age of a person will affect the occurrence of hypertension. In the study of Kosassy et al. (2023), it was stated that hypertension is often suffered by the elderly because age is one of the main risk factors. in the study of Siswanto et al. (2020). Hypertension at a young age affects 1 in 8 people aged 20–40 years, due to a lack of physical activity, smoking, and an unhealthy diet. In research by Amelia et al. (2024), it is said that diet is the most important behavior that can affect nutritional status. This is because the amount and quality of food consumed by individuals and communities affect food intake. Proper nutrition greatly affects the growth, physical, and mental development of all age groups. A proper diet leads to a standard weight, a body that is not prone to intolerable diseases, increased productivity at work, and protection from persistent diseases and sudden death. People need to improve their diet to be balanced so that the body is maintained and to avoid various chronic diseases associated with an unbalanced diet. Healthy eating benefits both the individual and society. Malnutrition is associated with chronic frailty, and increasing degenerative diseases account for more than 50% of deaths in Indonesia. It is important to pay attention to hypertension at a young age, as it can be associated with heart and brain abnormalities and increase the risk of cardiovascular disease in middle age (Rahmawati et al., 2023).

According to Permenkes No. 4 of 2019, the productive age category is 15–59 years old. Although hypertension generally occurs in the elderly, adolescents and adults who are in the productive age group are also at risk of developing hypertension. This is due to busy activities such as work or other activities at this age. Lifestyle changes can also cause hypertension at a productive age. Family history, stress level, and lifestyle are also risk factors associated with hypertension at a productive age. Obesity and potassium consumption are also among the factors contributing to hypertension at a productive age. The study investigated risk factors for hypertension such as age, gender, hereditary history, smoking, alcohol consumption, vegetable and fruit consumption, physical activity, and obesity in the productive age population (15–59 years) (Hintari et al., 2023). In Indonesia, based on data from the Ministry of Health in 2018, the incidence of hypertension in the

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elderly shows an increasing trend with age. The prevalence of hypertension in the elderly age group increased to 45.9%; in the young elderly (66–74 years), it increased to 57.6%; and it reached 63.8% for those over 75 years of age (Ministry of Health, 2019). Aging is a natural process in which a person experiences decline. The elderly need to adapt to these changes and experience psychological changes due to adjustments in their physical activities, social activities, and personal activities. In addition to psychological changes, the elderly also experience physical changes due to decreased function and cellular aging. Physical deterioration in the elderly can affect vital organs, such as the cardiovascular system and kidneys, which can lead to diseases such as hypertension (Ganti et al., 2023). A study conducted by Kartika et al. (2021) showed that age affects the risk of developing hypertension because, with increasing age, the risk of developing hypertension is higher. Hypertension occurs due to natural changes in the body that affect other organs, such as the heart, hormones, and blood vessels. Genetics is very influential on the incidence of hypertension. People with families with hypertension increase the risk of developing hypertension in their offspring. A family history of hypertension will increase the risk of hypertension by four times. In research by Akmal et al. (2023), it is also stated that the results of this study indicate that a history of hypertension is associated with the prevalence of hypertension. People who have a history of hypertension have a 2.9 times higher chance of developing hypertension compared to people who do not have a history of hypertension. Patients with hypertension need to be educated to be more careful in their lifestyles to avoid hypertension.

In a study by Kasumayanti et al. (2021), it was stated that heredity plays an important role in determining the extent to which a person is affected by hypertension. However, naturally, without intervention, hypertension will cause signs and symptoms. Family history means that a person is closer to his parents' blood pressure if there is a blood relationship, so he has a chance of developing hypertension. If you know that a parent or family member has hypertension, you should check your blood pressure regularly and avoid lifestyles that can increase blood pressure. In her research, Agnesia showed that family members who have high blood pressure have a 14.378 times greater risk compared to people who do not have a history of hypertension. Statistics show that if one parent has a non-communicable disease, their offspring will have a 25% chance of contracting the disease during their lifetime. If both parents have a non-communicable disease, the chance of contracting the disease is 60%. In addition, there are risk factors that can be changed, namely unhealthy behaviors related to lifestyle, such as:

1. Smoking

Recent research has revealed that a cigarette contains around 4000 harmful chemical compounds, which negatively affect the cardiovascular health of both active and passive smokers. The two main components of cigarette smoke, nicotine and carbon monoxide, have significant pathological effects on the vascular system. When they enter the bloodstream, these substances induce damage to the endothelial lining of the arteries, accelerate the process of atherosclerosis, and trigger vasoconstriction. The accumulation of these effects contributes to the elevation of blood pressure. Nicotine also plays a role in the mechanisms of addiction and stimulation of the sympathetic nervous system. This substance triggers the release of catecholamines, resulting in an increase in the rate and force of heart contractions, which in turn aggravates hypertension. Longitudinal studies have confirmed the correlation between smoking and increased arterial stiffness. Consequently, tobacco cessation is considered a crucial lifestyle intervention in cardiovascular disease prevention strategies.

This is in line with research by Akmal et al. (2023) showing that smoking can be associated with the incidence of hypertension. Those who smoke are 4.8 times more at risk of possibly developing hypertension. Prokoks with a history of hypertension need to have their blood pressure checked regularly. In a study by Amelia et al. (2024), it was stated that the right solution has not been found to overcome the problem of smoking in Indonesia.

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Based on a survey conducted by the Semesta authority on August 20, 2023, Indonesia is the country with the most smokers in the world. According to the report, 70.5% of the Indonesian population smokes. On the other hand, the community must be involved in creating smoke-free spaces through guidance and counseling through various media, including mass and electronic media. In addition, it is necessary to collaborate with various stakeholders, such as the government, community leaders, and religious leaders.

2. Excess natrium consumption

The World Health Organization (WHO) says to reduce the risk of hypertension by reducing salt consumption patterns. Global recommendations issued by this international body advocate limiting daily salt consumption. The WHO nutrition guidelines set the maximum threshold of sodium intake at 100 millimoles per day, which is equivalent to an approximation of 2.4 grams of sodium or 6 grams of salt. Consuming too much salt can result in an increased sodium concentration in the extracellular fluid. The body's homeostatic mechanisms activate a compensatory response to this condition. An osmotic shift occurs, resulting in the translocation of fluid from the intracellular compartment to the extracellular space. The consequence of this phenomenon is an expansion of extravascular fluid volume. This increase in volume can potentially induce hypervolemia, which in turn can contribute to the pathogenesis of hypertension through an elevation of cardiac preload and increased peripheral vascular resistance.

3. Consumption of high-fat foods

A person who habitually consumes saturated fats is associated with increased body weight, which is a risk factor for hypertension. Consumption of saturated fat also increases the risk of atherosclerosis, which is associated with increased blood pressure. Saturated fatty acids, trans fatty acids, and mono- and plural-unsaturated fatty acids constitute the composition of fatty acids. Besides saturated fatty acids, trans fatty acids are now receiving special attention. Trans-fatty acid consumption is negatively correlated with HDL cholesterol levels. This means that an increase in trans fatty acid intake tends to lead to a decrease in HDL cholesterol levels in the body.In addition, in a study by Akmal et al. (2023), it was stated that most people who do not have a history of hypertension but consume foods containing coconut milk or fast food will be more susceptible to hypertension.

4. Overweight

Obesity is often a common feature found in people with high blood pressure. Recent research suggests there is a significant correlation between being overweight and an increased risk of hypertension later in life. Although the mechanism underlying this relationship has not been fully revealed, various scientific studies have uncovered this. Hypertensive patients who are obese tend to have more active heart performance and more circulating blood volume, when compared to hypertensive patients who are of normal weight. This suggests a marked physiological difference in the cardiovascular system, although the cause-and-effect relationship between obesity and primary hypertension still requires further research to be comprehensively understood.

5. Stress

Environmental conditions, especially psychological stress, play an important role in the emergence of primary hypertension. Research shows that stress can affect blood pressure through the activation of the sympathetic nervous system. This system, which is active when the body is performing activities, is different from the parasympathetic system, which is dominant at rest. Increased sympathetic activity can cause irregular fluctuations in blood pressure. If the stress lasts for a long time, blood pressure can stay high. In situations of fear or acute stress, arterial pressure can even double within seconds.Chronic stress is often associated with hypertension, as the body's response to mental stress tends to

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increase blood pressure. In addition, stressed individuals often experience sleep disturbances, which can contribute to increased blood pressure.

To reduce the risk of stress and hypertension, several strategies can be implemented. These include developing a calmer approach to dealing with problems, maintaining a positive mindset, engaging in regular exercise, and taking time for recreation. This holistic approach can help manage stress and potentially lower the risk of hypertension. To reduce the risk of stress and hypertension, several strategies can be implemented. These include developing a calmer approach to dealing with problems, maintaining a positive mindset, engaging in regular exercise, and taking time for recreation. This holistic approach can help manage stress and potentially lower the risk of hypertension.

6. Alcohol consumption

Alcohol hurts the cardiovascular system similar to that of carbon monoxide, increasing the acidity of the blood. This causes the blood to become thicker, forcing the heart to work harder to pump blood around the body. There is a positive correlation between alcohol consumption and the risk of hypertension; the higher the alcohol intake, the greater the likelihood of experiencing an increase in blood pressure.

Research shows that consuming more than two glasses of alcoholic beverages daily can double a person's risk of suffering from hypertension. This fact makes alcohol a significant risk factor in the development of hypertension. Moreover, excessive alcohol consumption not only affects blood pressure but can also cause damage to the heart and other vital organs in the body. Nelwan (2019) said that promotional and preventive efforts through counseling and health checks are important steps in overcoming the problem of non-communicable diseases (NCDs) in the elderly. Counseling or socialization is an effort made to disseminate information and increase self-confidence so that people not only know and can do so but can also independently apply the information obtained from counseling to improve their health status in an area and prevent disease. Puskesmas has programs in disease prevention and control efforts in the form of counseling, IEC (Information, Communication, and Education), partnerships, community empowerment, and early detection of disease. Puskesmas officers conduct counseling and IEC (information, communication, and education) in the community so that people know how to prevent and control hypertension so as to minimize the occurrence of hypertension cases in the area. Activities carried out in the form of holding Prolanis (Chronic Disease Management Program), Posbindu (Integrated Coaching Post for Non-Communicable Diseases), and Kudasaku (I Come, Welcome Me). The term Cerdik for disease prevention was also conveyed in this counseling. Clever behaviors include regular health checks, avoiding cigarette smoke, exercising regularly, managing a diet with balanced nutrition, getting enough rest, and managing stress. Media such as posters, brochures, and leaflets were used to promote health education and distribute them to the community in order to obtain health information about hypertension.

Early detection of non-communicable diseases helps identify early risk by conducting interviews and blood pressure measurements at available health services for at-risk and non-risk groups. Communities are expected to understand their blood pressure and avoid risks. Building community health center partnerships with various sectors such as the Department of Social Affairs and Department of Health, community leaders in an area such as RT, RW, Kelurahan, Kecamatan, PKK, youth organizations, and schools around the Krapyak Kidul Community Health Center area. The purpose of the partnership is to ensure that the activities implemented can be accepted by the community. Respiratory relaxation can lower blood pressure in elderly men and women with stage1 hypertension. The way this therapy works is by reducing sympathetic nerve activity, reducing contractility, pulse strength, and blood volume, and increasing baroreceptor activity. This results in a decrease in cardiac output and blood pressure. Another factor that contributes to lower blood pressure in the elderly is living with family. Families have an important role in the prevention of hypertension by providing healthy food and providing information on blood pressure control. Family support also

showed a positive relationship with the blood pressure of elderly people with hypertension. The results of this study provide insight into the importance of holistic care involving deep breath relaxation techniques and family support in managing the blood pressure of the elderly. Hypertension occurs because the flow of blood carrying oxygen and nutrients throughout the body is restricted. This causes the pressure in the blood vessels to increase continuously beyond normal limits. If left untreated, hypertension can damage important organs, especially the kidneys, potentially even causing kidney failure. To prevent such complications, hypertension treatment is essential, both through medical treatment and alternative therapies such as deep and slow breathing techniques.

Deep breath relaxation has a positive effect on health by providing relaxation to muscles and blood vessels, thereby improving blood circulation. This study showed that women experienced a more significant reduction in blood pressure than men after deep breathing relaxation. Previous studies have also revealed that the difference in blood pressure between men and women is due to the lower blood pressure threshold in women. The elderly often experience health problems related to the cardiovascular system, including hypertension. One way to overcome this problem is through non-pharmacological treatment, such as deep breath relaxation. Deep breath relaxation can stimulate the production of nitric oxide, which can reduce high blood pressure. Therefore, deep breath relaxation therapy can play a role in the treatment of hypertension in the elderly by significantly reducing blood pressure (Doren et al., 2024).

4. Conclusions

The prevalence of hypertension in the Krapyak Kidul Health Center working area in 2023 was high, reaching 91.7% of the total cases recorded, with more women suffering from hypertension (59.8%) than men (34.1%). The majority of hypertension cases (68.1%) were old cases, indicating challenges in long-term hypertension control and a possible lack of adherence to treatment or necessary lifestyle changes. The age distribution of hypertensive patients showed that the late productive age group (45–64 years) had the highest percentage (55.6%), followed by the elderly >65 years (32.4%). This finding confirms that hypertension is not only a health problem for the elderly but also threatens the productive age population, with potentially significant socio-economic impacts.

Thank-you note

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Bibliography

Akmal, D., Rahmawati., Setianto, R., Dewi, B. A., Anri, A. 2023. *Hubungan Riwayat Keluarga dan Merokok dengan Kejadian Hipertensi.* Journal of Health and Medical Science, 11(2).

Amelia, A., Fajrianti, G. & Murniani, M. 2024. *Hubungan Gaya Hidup terhadap Kejadian Hipertensi.* Jurnal Penelitian Perawat Profesional, 6(4): 1487-1498.

Asri, S. K. & Julisman, I. 2022. *Pengaruh Citra Merek dan Kualitas Produk Philips terhadap Minat Beli Konsumen pada Yogya Garnd Majalengka.* Jurnal Impresi Indonesia, 1(3): 282–287. https://doi.org/10.36418/jii.v1i3.40

Doren, M., Putri, R. M. & Devi, H. M. 2024. *Perbedaan Tekanan Darah Lansia Laki-Laki Dan Perempuan Melalui Relaksasi Nafas Dalam.* In Nursing News: Jurnal Ilmiah Keperawatan (Vol. 8, Issue 1).

Fadilah, R. & Rakhmawati, A. 2023. *Pengaruh Slow Deep Breathing Terhadap Tekanan Darah Pada Penderita Hipertensi di Wilayah Puskesmas Tarumajaya Tahun 2023.* MAHESA: Malahayati Health Student Journal, 3(11): 3480-3496.

Faisal, D. R., Lazuana, T., Ichwansyah, F. & Fitria, E. 2022. *Faktor Risiko Hipertensi Pada Usia Produktif Di Indonesia Dan Upaya Penanggulangannya.* Buletin Penelitian Sistem Kesehatan, 25(1): 32–41. https://doi.org/10.22435/hsr.v25i1.512 4

Fuziah, Y. & Syahputra, R. *Hubungan Antara Efikasi Diri Dengan Manajemen Perawatan Diri Pada Penderita Hipertensi Di Puskesmas Indrapura Kabupaten Batubara Tahun 2019.* In Journal Of Midwifery Senior (Vol. 4).

Gati, N. W., Dewi, P. S. & Prorenata, P. 2023. *Gambaran Aktivitas Fisik pada Lansia dengan Hipertensi di Posyandu Lansia Jalakan Hargosari.* ASJN (Aisyiyah Surakarta Journal of Nursing), 4(1): 22-27.

Hardiman, R. M. & Siregar, F. M. 2022. *Prevalensi dan faktor risiko prehipertensi dan hipertensi pada mahasiswa tingkat akhir Fakultas Kedokteran Universitas Riau*. Jurnal Kedokteran Syiah Kuala, 22(1). https://doi.org/10.24815/jks.v22i1.212 57

Hintari, S. & Fibriana, A. I. 2023. H*ipertensi pada Penduduk Usia Produktif (15-59 Tahun) di Wilayah Kerja Puskesmas Pageruyung Kabupaten Kendal Sri. Higeia Journal of Public Health Research and Development*, *1*(2).

Br.Siahaan, R. H., Utomo, W. & Herlina, H. 2022. *Hubungan Dukungan Keluarga dan Efikasi Diri dengan Motivasi Lansia Hipertensi Dalam Mengontrol Tekanan Darah*. *Holistic Nursing and Health Science*, *5*(1). https://doi.org/10.14710/hnhs.5.1.2022.43-53

Isnaini, I. & Hermawati, H. 2024. *Hubungan Tingkat Pengetahuan Hipertensi dengan Upaya Pengendalian Hipertensi di Puskesmas Ngemplak Boyolali.* IJOH: Indonesian Journal of Public Health, 2(2): 187–197. https://jurnal.academiacenter.org/inde x.php/IJOH

Akmal, D., Rahmawati, Setianto, R., Dewi, B. A. & Anri. 2023. *Hubungan Riwayat Keluarga dan Merokok Dengan Kejadian Hipertensi. Journal of Nursing and Public Health*, *11*(2).

Kasumayanti E., Zurrahmi Z.R, & Maharani. 2021. *Faktor-faktor yang Berhubungan dengan Kejadian Hpertensi Usia Produktif di Desa Pulau Jambu Wilayah Kerja UPTD Puskesmas Kuok*, Jurnal Ners, 5(1): 1 - 7

Kosassy, S. M., Risdawati, R. & Mulya, A. P. 2023. *Pengaruh Senam Hipertensi Terhadap Tekanan Darah Pada Lansia Dengan Hipertensi Di Puskesmas Rasimah Ahmad Bukittinggi*. MANUJU: Malahayati Nursing Journal, 5(9): 3189-3199.

Nelwan, J. E. 2019. *Pengaruh Penyuluhan Kesehatan Terhadap Perubahan Pengetahuan Masyarakat Tentang Hipertensi Di Kota Manado*. Journal PHWB, 1(2): 1–7